Amendment to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (Cancelled)

19. (Currently Amended) ~~The method of claim 18~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the plurality of RF waveforms are generated in one or more groups, each group of the one or more groups comprising two or more RF waveforms having a predefined time spacing, wherein at least one RF waveform of each group is inverted, wherein the predefined time spacing corresponds to one fourth of the period of a frequency of an eliminated fold image.

20. (Cancelled)

21. (Currently Amended) ~~The method of claim 2~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein said plurality of RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time spacing between the plurality of RF waveforms corresponds to the time spacing between the plurality of samples.

22. (Currently Amended) ~~The method of claim 2~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein said plurality of RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time spacing of the plurality of samples is substantially equal corresponding to a generation rate of the plurality of RF waveforms.

23. (Original) The method of claim 22, wherein the generation rate corresponds to a desired center frequency within a frequency band of interest.

24. (Original) The method of claim 22, wherein the generation rate is programmable.

25-35. (Cancelled)

36. (Currently Amended) ~~The method of claim 1~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time profile is in accordance with a shifted average DC level of the desired waveform.

37. (Original) The method of claim 36, wherein the shifted average DC level is shifted such that each of the plurality of samples has the same polarity.

38. (Original) The method of claim 36, further comprising removing a DC component from an aggregate RF energy spectra.

39-42. (Cancelled)

43. (Currently Amended) ~~The method of claim 38~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time profile of the desired waveform corresponds to a composite profile of a plurality of orthogonal waveforms, wherein the plurality of orthogonal waveforms have phase shifts in accordance with a plurality of Walsh functions.

44. (Original) The method of claim 43, wherein the plurality of orthogonal waveforms comprises n orthogonal waveforms phase shifted by 0 or π radians in accordance with a plurality of n-bit Walsh functions.

45. (Currently Amended) ~~The method of claim 39~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time profile of the desired waveform corresponds to a composite profile of a plurality of orthogonal waveforms, wherein a first orthogonal waveform of the plurality of orthogonal waveforms is the Hilbert transform of a second orthogonal waveform of the plurality of orthogonal waveforms.

46. (Currently Amended) ~~The method of claim 39~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time profile of the desired waveform corresponds to a composite profile of a plurality of orthogonal waveforms, wherein each orthogonal waveform of the plurality of orthogonal waveforms is an n^{th} order derivative of a first orthogonal waveform of the plurality of orthogonal waveforms.

47-53. (Cancelled)

54. (Currently Amended) ~~The method of claim 53~~ A method of emulating a desired waveform, comprising:

producing a time profile of said desired waveform characterized by a plurality of sample values;

generating a plurality of RF waveforms, each RF waveforms are generated in accordance with a timing of a plurality of samples corresponding to said plurality of sample values, wherein the time profile is produced by an inverse Fourier transformation of a frequency profile of the desired waveform, wherein the frequency profile is produced by a Fourier transformation of a vector amplitude profile of the desired waveform, wherein the vector amplitude profile comprises x, y, z, t, amplitude, and vector polarization angle parameters, wherein x, y, and z correspond to location coordinates, and wherein one or more parameters of said x, y, z, t, amplitude, and vector polarization angle parameters is maintained constant to define at least one of signal amplitude and polarization atone of a point, line, plane, and surface in space over time relative to a position.

55. (Original) The method of claim 54, wherein the position is a transmit antenna position.

56-72. (Cancelled)

73. (Currently Amended) ~~The method of claim 72~~ A method for generating waveforms, comprising:

generating a plurality of RF waveforms at a waveform generation rate; and

modulating the plurality of RF waveforms in accordance with samples of a time profile of a prototype signal to produce an aggregate RF energy that approximates the RF energy of the prototype signal;

generating a first plurality of RF waveforms in accordance with corresponding samples of the time profile; and

generating a second plurality of RF waveforms in accordance with corresponding samples of the time profile, wherein there is a defined time spacing between each of the second plurality of RF waveforms and a corresponding one of the first plurality of RF waveforms, wherein the defined time spacing corresponds substantially to one fourth of a rate at which both the first plurality of RF waveforms and second plurality of RF waveforms are generated.

74-89. (Cancelled)

90. (Currently Amended) ~~The waveform generator of claim 89~~ A waveform generator, comprising:

a signal generator that generates a plurality of RF waveforms at a waveform generation rate, each of said plurality of RF waveforms having an amplitude scaled in accordance with a desired envelope of a prototype signal; and

a filter that limits the aggregate RF energy of the plurality of RF waveforms to within a frequency band of interest, wherein the signal generator includes:

a first signal generator that generates a first plurality of RF waveforms having amplitudes modulated in accordance with the desired envelope;

a second signal generator that generates a second plurality of RF waveforms having amplitudes modulated in accordance with the desired envelope, wherein there is a defined time spacing between each of the second plurality of RF waveforms and a corresponding one of the first plurality of RF waveforms, wherein the defined time spacing corresponds substantially to one fourth of a rate at which both the first plurality of RF waveforms and second plurality of RF waveforms are generated.

91-100. (Cancelled)